

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*Case Serial No.
NMWC13944

If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other8. Well Name and No.
COTTONWOOD 29-32 FED COM WCA 3H

2. Name of Operator

CHISHOLM ENERGY OPERATING, LLC

Contact: JENNIFER ELROD

Email: jelrod@chisholmenergy.com

9. API Well No.
30-015-43703

3a. Address

801 CHERRY ST., SUITE 1200 - UNIT 20
FORT WORTH, TX 76102

3b. Phone No. (include area code)

Ph: 817-953-3728

10. Field and Pool or Exploratory Area
PURPLE SAGE; WOLFCAMP

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 29 T26S R26E Mer NMP NENE 100FNL 1300FEL
32.020228 N Lat, 104.310621 W Lon

11. County or Parish, State

EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

12/21/2017:

CHANGE WELL NAME

FROM: COTTONWOOD 29-32 FED COM WCB 3H

TO: COTTONWOOD 29-32 FED COM WCA 3H ✓ 320659

CHANGE LANDING POINT LOCATION ✓

FROM: 600 FNL & 1330 FEL

TO: 330 FNL & 440 FEL

CHANGE BOTTOM HOLE LOCATION ✓

FROM: 330 FSL & 1330 FEL

TO: 330 FSL & 440 FEL

Old property number 317878

SEE ATTACHED FOR
CONDITIONS OF APPROVALBLM OIL CONSERVATION
ARTESIA DISTRICT

JAN 22 2018

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #398859 verified by the BLM Well Information System
For CHISHOLM ENERGY OPERATING, LLC, sent to the Carlsbad
Committed to AFMSS for processing by PRISCILLA PEREZ on 12/22/2017 ()

RECEIVED

Name (Printed/Typed) JENNIFER ELROD

Title SENIOR REGULATORY TECH

Signature (Electronic Submission)

Date 12/21/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

Mustafa Haque

Title

PETROLEUM ENGINEER

Date 1-17-2018

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

CFO

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

RUP 1-24-2018

Additional data for EC transaction #398859 that would not fit on the form

32. Additional remarks, continued

✓ CHANGE MEASURED DEPTH
FROM: 16030'MD/9210'TVD
TO: 15699'MD/8403'TVD

CHANGE INTERMEDIATE CASING DESIGN DEPTH & GRADE
PLEASE SEE ATTACHED REVISIONS

ADD DV TOOL TO INTERMEDIATE STRING @ 1800'MD/TVD

CHANGE INTERMEDIATE CEMENT DESIGN
PLEASE SEE ATTACHED REVISIONS

DISTRICT I

1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-8161 Fax: (575) 393-0720

DISTRICT II

811 S. First St., Artesia, NM 88210
Phone (575) 748-1283 Fax: (575) 748-9720

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV

1226 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised August 1, 2011

OIL CONSERVATION DIVISION
1226 South St. Francis Dr.
Santa Fe, New Mexico 87505

RECEIVED

Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

X AMENDED REPORT

API Number 30-015-43703	Pool Code 98220	Pool Name PURPLE SAGE; WOLFCAMP
Property Code	Property Name COTTONWOOD 29-32 FED COM WCA	Well Number 3H
OGRID No. 372137	Operator Name CHISHOLM ENERGY OPERATING, LLC	Elevation 3421'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	FEET from the	North/SOUTH LINE	FEET from the	East/West Line	County
A	29	26 S	26 E		100	NORTH	1300	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	FEET from the	North/SOUTH LINE	FEET from the	East/West Line	County
LOT 1	32	26 S	26 E		330	SOUTH	440	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
446.16			

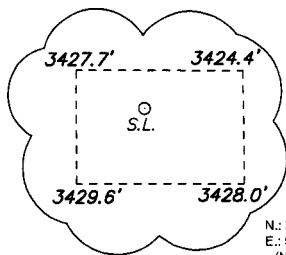
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

SURFACE LOCATION

Lat - N 32.02022827°
Long - W 104.31062173°
NMSPC- N 371098.7
E 548376.3
(NAD-83)

LANDING POINT

600' FNL & 440' FEL
Lat - N 32.01885499°
Long - W 104.30783787°
NMSPC- N 370599.3
E 549239.2
(NAD-83)



N.: 371200.1
E.: 544363.7
(NAD 83)

N.: 371197.5
E.: 547018.0
(NAD 83)

N.: 371199.7
E.: 549675.3
(NAD 83)

N.: 365875.0
E.: 544377.2
(NAD 83)

N.: 365876.7
E.: 547043.0
(NAD 83)

N.: 365876.8
E.: 549711.0
(NAD 83)

N.: 363780.1
E.: 544377.7
(NAD 83)

N.: 363776.1
E.: 549713.1
(NAD 83)

BOTTOM HOLE LOCATION

Lat - N 32.00100577°
Long - W 104.30773456°
NMSPC- N 364106.3
E 549272.7
(NAD-83)

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Jennifer Elrod 12/21/17
Signature Date

JENNIFER ELROD

Printed Name
jelrod@chisholmenenergy.com

Email Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

ALDOUS L. MOSES 12/31/2017
Date Surveyed
Signature of Professional Surveyor

Certificate of Survey 7977
BASIN SURVEYS

0' 1000' 2000' 3000' 4000'
SCALE: 1" = 2000'
WO Num.: 33258

26. Eddy NM

Well Name: Cottonwood 29-32 Fed Com WCB

Well Number: 3H

28: a) Move LP

From: 600' FNL & 1330' FEL

To: 330' FNL & 440' FEL

b) Move BHL

From: 330' FSL & 1330' FEL

To: 330' FSL & 440' FEL

c) Change Well Name

From: Cottonwood 29-32 Fed Com WCB 3H

To: Cottonwood 29-32 Fed Com WCA 3H

d) Measured Depth

From: 16,030' MD / 9,210' TVD

To: ^{15,664'}15,699' MD / ^{8,365'}8,403' TVD

e) Intermediate Casing Design (Depth and Grade)

Hole Size	Casing Interval		Csg. Size	Wt. (lbs)	Grade	Conn	SF Collapse	SF Burst	SF Tension
	From	To							
12.25"	0	7500	9.625"	40	L-80 HC	BTC	1.47	1.46	2.76
<u>Intermediate</u>									
Tension	A 1.8 design factor with effects of buoyancy with a fluid equal to a mud weight of:							9.8	ppg
Collapse	A 1.125 design factor with 1/3 TVD internal evacuation and collapse force equal to a mud gradient of:							9.8	ppg
Burst	A 1.125 design factor with full external evacuation and burst force equal to a mud gradient of:							9.8	ppg

f) Add DV Tool to Intermediate string (1800' MD/TVD)

DV tool will be added to the intermediate string @ ~1800' MD/TVD. This depth may vary based on hole conditions and cement volumes will be adjusted. DV tool will be set a minimum of 50 feet below the previous casing and a minimum of 200 feet above the intermediate shoe.

g) Update Intermediate Cement Design

1 st Stage	Type	Description	Amount	Volume	TOC
	Lead	12.7 ppg, 2.19 cuft/sk, Class C, 6% Gel, 5% Salt, 0.45% Retarder, Defoamer, LCM material	1895 sks	738 bbls	DV Tool
	Tail	14.8 ppg, 1.33 cuft/sk, Class C, Retarder, Defoamer	215 sks	51 bbls	Premium cement around shoe

DV Tool @ 1800'

2 nd Stage	Type	Description	Amount	Volume	TOC
	Lead	12.7 ppg, 2.18 cuft/sk, Class C, 6% Gel, 5% Salt, Defoamer	420 sks	163 bbls	Surface
	Tail	14.8 ppg, 1.34 cuft/sk, Class C, 1% Calcium Chloride, Defoamer	200 sks	48 bbls	Premium cement around DV Tool

***150% Excess**

**** DV/ACP Tool @ 1800' MD/TVD**

h) Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	420	FW Gel	8.4-8.8	34-36	N/C
420	7500	Brine/Diesel Emulsion	8.8-9.8	28-30	N/C
7500	15,699	Cut Brine	9.0-9.6	35-40	N/C

Location: Eddy County, NM
Field: Eddy County, NM NAD83
Facility: Cottonwood 29-32 Fed Com WCA No. 3H

Slot: Cottonwood 29-32 Fed Com WCA No. 3H
Well: Cottonwood 29-32 Fed Com WCA No. 3H
Wellbore: Cottonwood 29-32 Fed Com WCA No. 3H

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	22.00	0.000	90.000	22.00	0.00	0.00	0.00	0.00
End of Tangent	7687.38	0.000	90.000	7687.38	0.00	0.00	0.00	0.00
End of Build	8229.05	65.000	90.000	8120.11	0.00	275.68	12.00	1.44
End of Tangent	8387.58	65.000	90.000	8187.11	0.00	419.36	0.00	2.20
End of 3D Arc	9146.61	93.200	179.704	8365.59	-485.82	862.87	12.00	490.33
End of Tangent	15664.09	93.200	179.704	8001.77	-6993.05	896.48	0.00	6997.65

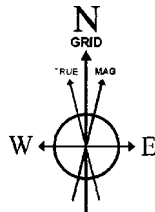
Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
15664.09	93.200	179.704	8001.77	-6993.05	896.48	549272.70	364106.30	32°00'03.620"N	104°18'27.845"W

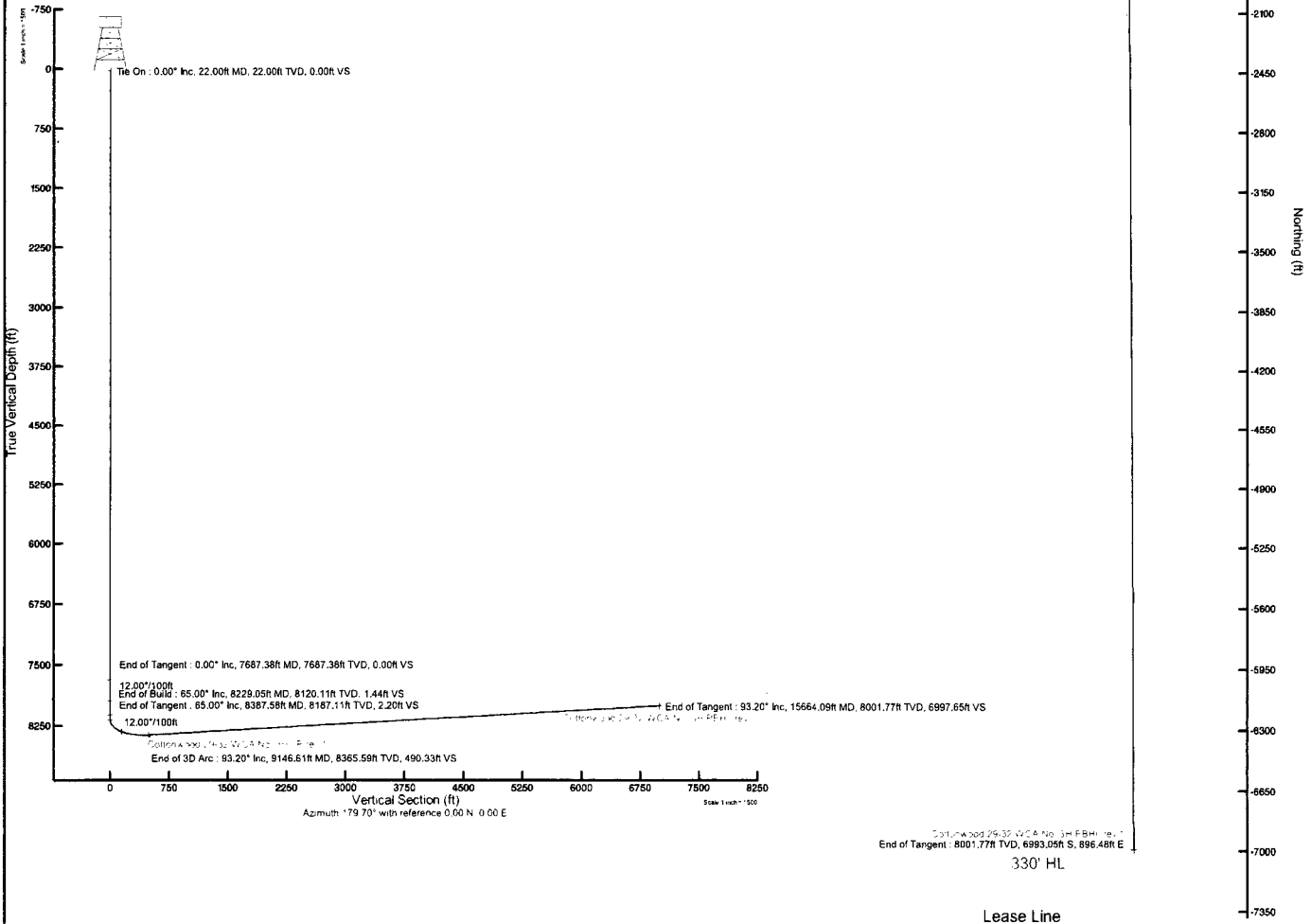
Plot reference wellbore is Cottonwood 29-32 Fed Com WCA No. 3H Rev B.0	Grid System: NAD83 / TM New Mexico SP, Eastern Zone (2011) US feet
True vertical depths are referenced to Rig: Nabors M55 (RB)	North Reference: Grid north
Measured depths are referenced to Rig: Nabors M55 (RB)	Scale: True distance
Rig: Nabors M55 (RB) to Mean Sea Level: 3443 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: Cottonwood 29-32 Fed Com WCA No. 3H): 3421 feet	Created by: Baskin on 2017-12-28
Coordinates are in feet referenced to Slot	Database: WellArchitectDB

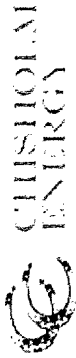
Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Cottonwood 29-32 Fed Com WCA No. 3H	549272.300	371098.700	32°01'12.822"N	104°18'38.238"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Cottonwood 29-32 Fed Com WCA No. 3H	0.00	0.00	549272.300	371098.700
Rig: Nabors M55 (RB) to Ground level (At Slot: Cottonwood 29-32 Fed Com WCA No. 3H)				22ft
Mean Sea Level to Ground level (At Slot: Cottonwood 29-32 Fed Com WCA No. 3H)				3421ft
Rig: Nabors M55 (RB) to Mean Sea Level				3443ft



BGGM (1900.0 to 2019.0) Dip: 59.70° Field: 47757.2 nT
Magnetic North is 7.32 degrees East of True North (at 28/Dec/2017)
Grid North is 0.01 degrees East of True North
To correct azimuth from True to Grid subtract 0.01 degrees
To correct azimuth from Magnetic to Grid add 7.31 degrees





Planned Wellpath Report

Cottonwood 29-32 Fed Com WCA No. 3H Rev B.0

Page 1 of 8



REFERENCE WELLPATH IDENTIFICATION

Operator	Chisholm Energy	Slot	Cottonwood 29-32 Fed Com WCA No. 3H
Area	Eddy County, NM	Well	Cottonwood 29-32 Fed Com WCA No. 3H
Field	Eddy County, NM NAD83	Wellbore	Cottonwood 29-32 Fed Com WCA No. 3H
Facility	Cottonwood 29-32 Fed Com WCA No. 3H		

REPORT SETUP INFORMATION

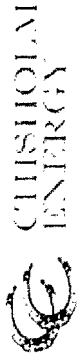
Projection System	NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Buiduyh
Scale	0.999909	Report Generated	28/Dec/2017 at 15:06
Convergence at slot	0.01° East	Database/Source file	WellArchitectDB/Cottonwood_29-32_Fed_Com_WCA_No_3H_Rev_B.0.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W
Facility Reference Pt			548376.30	371098.70	32°01'12.822"N	104°18'38.238"W
Field Reference Pt			165000.00	0.00	30°59'39.893"N	105°32'03.866"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig: Nabors M55 (KB) to Facility Vertical Datum	3443.00ft
Horizontal Reference Pt	Slot	Rig: Nabors M55 (KB) to Mean Sea Level	3443.00ft
Vertical Reference Pt	Rig: Nabors M55 (KB)	Rig: Nabors M55 (KB) to Ground Level at Slot (Cottonwood 29-32 Fed Com WCA No. 3H)	22.00ft
MD Reference Pt	Rig: Nabors M55 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.70°



Planned Wellpath Report

Cottonwood 29-32 Fed Com WCA No. 3H Rev B.0
Page 2 of 8

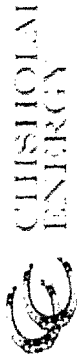


REFERENCE WELLPATH IDENTIFICATION

Operator	Chisholm Energy	Slot	Cottonwood 29-32 Fed Com WCA No. 3H
Area	Eddy County, NM	Well	Cottonwood 29-32 Fed Com WCA No. 3H
Field	Eddy County, NM NAD83	Wellbore	Cottonwood 29-32 Fed Com WCA No. 3H
Facility	Cottonwood 29-32 Fed Com WCA No. 3H		

WELLPATH DATA (163 stations) † = interpolated/extrapolated station

MD [ft]	Course Length [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
0.00†	0.00	0.000	90.000	0.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
22.00	22.00	0.000	90.000	22.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	Tie On
122.00†	100.00	0.000	90.000	122.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
222.00†	100.00	0.000	90.000	222.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
322.00†	100.00	0.000	90.000	322.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
422.00†	100.00	0.000	90.000	422.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
522.00†	100.00	0.000	90.000	522.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
622.00†	100.00	0.000	90.000	622.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
722.00†	100.00	0.000	90.000	722.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
822.00†	100.00	0.000	90.000	822.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
922.00†	100.00	0.000	90.000	922.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
1022.00†	100.00	0.000	90.000	1022.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
1122.00†	100.00	0.000	90.000	1122.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
1222.00†	100.00	0.000	90.000	1222.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
1322.00†	100.00	0.000	90.000	1322.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
1422.00†	100.00	0.000	90.000	1422.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
1522.00†	100.00	0.000	90.000	1522.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
1622.00†	100.00	0.000	90.000	1622.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
1722.00†	100.00	0.000	90.000	1722.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
1822.00†	100.00	0.000	90.000	1822.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
1922.00†	100.00	0.000	90.000	1922.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
2022.00†	100.00	0.000	90.000	2022.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
2122.00†	100.00	0.000	90.000	2122.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
2222.00†	100.00	0.000	90.000	2222.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
2322.00†	100.00	0.000	90.000	2322.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
2422.00†	100.00	0.000	90.000	2422.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
2522.00†	100.00	0.000	90.000	2522.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
2622.00†	100.00	0.000	90.000	2622.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
2722.00†	100.00	0.000	90.000	2722.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
2822.00†	100.00	0.000	90.000	2822.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	



Planned Wellpath Report

Cottonwood 29-32 Fed Com WCA No. 3H Rev B.0
Page 3 of 8

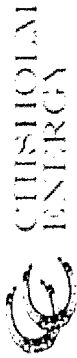


REFERENCE WELLPATH IDENTIFICATION

Operator	Chisholm Energy	Slot	Cottonwood 29-32 Fed Com WCA No. 3H
Area	Eddy County, NM	Well	Cottonwood 29-32 Fed Com WCA No. 3H
Field	Eddy County, NM NAD83	Wellbore	Cottonwood 29-32 Fed Com WCA No. 3H
Facility	Cottonwood 29-32 Fed Com WCA No. 3H		

WELLPATH DATA (163 stations) † = interpolated/extrapolated station

MD [ft]	Course Length [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]	Comments
2922.00†	100.00	0.000	90.000	2922.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
3022.00†	100.00	0.000	90.000	3022.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
3122.00†	100.00	0.000	90.000	3122.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
3222.00†	100.00	0.000	90.000	3222.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
3322.00†	100.00	0.000	90.000	3322.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
3422.00†	100.00	0.000	90.000	3422.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
3522.00†	100.00	0.000	90.000	3522.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
3622.00†	100.00	0.000	90.000	3622.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
3722.00†	100.00	0.000	90.000	3722.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
3822.00†	100.00	0.000	90.000	3822.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
3922.00†	100.00	0.000	90.000	3922.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
4022.00†	100.00	0.000	90.000	4022.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
4122.00†	100.00	0.000	90.000	4122.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
4222.00†	100.00	0.000	90.000	4222.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
4322.00†	100.00	0.000	90.000	4322.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
4422.00†	100.00	0.000	90.000	4422.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
4522.00†	100.00	0.000	90.000	4522.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
4622.00†	100.00	0.000	90.000	4622.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
4722.00†	100.00	0.000	90.000	4722.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
4822.00†	100.00	0.000	90.000	4822.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
4922.00†	100.00	0.000	90.000	4922.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
5022.00†	100.00	0.000	90.000	5022.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
5122.00†	100.00	0.000	90.000	5122.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
5222.00†	100.00	0.000	90.000	5222.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
5322.00†	100.00	0.000	90.000	5322.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
5422.00†	100.00	0.000	90.000	5422.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
5522.00†	100.00	0.000	90.000	5522.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
5622.00†	100.00	0.000	90.000	5622.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
5722.00†	100.00	0.000	90.000	5722.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00
5822.00†	100.00	0.000	90.000	5822.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	0.00



Planned Wellpath Report

Cottonwood 29-32 Fed Com WCA No. 3H Rev B.0
Page 4 of 8



REFERENCE WELLPATH IDENTIFICATION

Operator	Chisholm Energy	Slot	Cottonwood 29-32 Fed Com WCA No. 3H
Area	Eddy County, NM	Well	Cottonwood 29-32 Fed Com WCA No. 3H
Field	Eddy County, NM NAD83	Wellbore	Cottonwood 29-32 Fed Com WCA No. 3H
Facility	Cottonwood 29-32 Fed Com WCA No. 3H		

WELLPATH DATA (163 stations) † = interpolated/extrapolated station

MD	Course Length	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	DLS	Build Rate	Turn Rate	Comments
[ft]	[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[°/100ft]	[°/100ft]	[°/100ft]	
5922.00†	100.00	0.000	90.000	5922.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
6022.00†	100.00	0.000	90.000	6022.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
6122.00†	100.00	0.000	90.000	6122.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
6222.00†	100.00	0.000	90.000	6222.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
6322.00†	100.00	0.000	90.000	6322.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
6422.00†	100.00	0.000	90.000	6422.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
6522.00†	100.00	0.000	90.000	6522.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
6622.00†	100.00	0.000	90.000	6622.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
6722.00†	100.00	0.000	90.000	6722.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
6822.00†	100.00	0.000	90.000	6822.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
6922.00†	100.00	0.000	90.000	6922.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
7022.00†	100.00	0.000	90.000	7022.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
7122.00†	100.00	0.000	90.000	7122.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
7222.00†	100.00	0.000	90.000	7222.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
7322.00†	100.00	0.000	90.000	7322.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
7422.00†	100.00	0.000	90.000	7422.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
7522.00†	100.00	0.000	90.000	7522.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
7622.00†	100.00	0.000	90.000	7622.00	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	
7687.38	65.38	0.000	90.000	7687.38	0.00	0.00	0.00	548376.30	371098.70	32°01'12.822"N	104°18'38.238"W	0.00	0.00	0.00	End of Tangent
7722.00†	34.62	4.154	90.000	7721.97	0.01	0.00	1.25	548377.55	371098.70	32°01'12.822"N	104°18'38.223"W	12.00	12.00	259.97	
7822.00†	100.00	16.154	90.000	7820.22	0.10	0.00	18.85	548395.15	371098.70	32°01'12.822"N	104°18'38.019"W	12.00	12.00	0.00	
7922.00†	100.00	28.154	90.000	7912.67	0.30	0.00	56.49	548432.79	371098.70	32°01'12.822"N	104°18'37.582"W	12.00	12.00	0.00	
8022.00†	100.00	40.154	90.000	7995.27	0.59	0.00	112.53	548488.82	371098.70	32°01'12.822"N	104°18'36.931"W	12.00	12.00	0.00	
8122.00†	100.00	52.154	90.000	8064.42	0.97	0.00	184.52	548560.81	371098.70	32°01'12.822"N	104°18'36.095"W	12.00	12.00	0.00	
8222.00†	100.00	64.154	90.000	8117.09	1.41	0.00	269.32	548645.59	371098.70	32°01'12.821"N	104°18'35.110"W	12.00	12.00	0.00	
8229.05	7.05	65.000	90.000	8120.11	1.44	0.00	275.68	548651.95	371098.70	32°01'12.821"N	104°18'35.036"W	12.00	12.00	0.00	End of Build
8322.00†	92.95	65.000	90.000	8159.39	1.88	0.00	359.92	548736.19	371098.70	32°01'12.821"N	104°18'34.058"W	0.00	0.00	0.00	
8387.58	65.58	65.000	90.000	8187.11	2.20	0.00	419.36	548795.62	371098.70	32°01'12.821"N	104°18'33.367"W	0.00	0.00	0.00	End of Tangent
8422.00†	34.42	65.287	94.541	8201.58	3.60	-1.24	450.56	548826.81	371097.46	32°01'12.809"N	104°18'33.005"W	12.00	0.83	13.19	
8522.00†	100.00	66.878	107.558	8242.27	21.60	-18.77	540.00	548916.25	371079.93	32°01'12.635"N	104°18'31.966"W	12.00	1.59	13.02	



CHISHOLM
ENERGY

Planned Wellpath Report

Cottonwood 29-32 Fed Com WCA No. 3H Rev B.0

Page 5 of 8



**BAKER
HUGHES**
a GE company

REFERENCE WELLPATH IDENTIFICATION

Operator	Chisholm Energy	Slot	Cottonwood 29-32 Fed Com WCA No. 3H
Area	Eddy County, NM	Well	Cottonwood 29-32 Fed Com WCA No. 3H
Field	Eddy County, NM NAD83	Wellbore	Cottonwood 29-32 Fed Com WCA No. 3H
Facility	Cottonwood 29-32 Fed Com WCA No. 3H		

WELLPATH DATA (163 stations) † = interpolated/extrapolated station

MD [ft]	Course Length [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
8622.00†	100.00	69.504	120.175	8279.55	59.59	-56.32	624.64	549000.88	371042.38	32°01'12.263"N	104°18'30.983"W	12.00	2.63	12.62	
8722.00†	100.00	73.005	132.301	8311.79	115.92	-112.25	700.77	549077.01	370986.46	32°01'11.710"N	104°18'30.099"W	12.00	3.50	12.13	
8822.00†	100.00	77.193	143.942	8337.58	188.11	-184.11	765.07	549141.30	370914.61	32°01'10.998"N	104°18'29.352"W	12.00	4.19	11.64	
8922.00†	100.00	81.874	155.182	8355.80	273.02	-268.76	814.73	549190.95	370829.97	32°01'10.161"N	104°18'28.776"W	12.00	4.68	11.24	
9022.00†	100.00	86.855	166.156	8365.65	366.94	-362.50	847.57	549223.79	370736.23	32°01'09.233"N	104°18'28.395"W	12.00	4.98	10.97	
9122.00†	100.00	91.950	177.025	8366.69	465.75	-461.24	862.16	549238.38	370637.50	32°01'08.256"N	104°18'28.225"W	12.00	5.09	10.87	
9146.61	24.61	93.200	179.704	8365.59	490.33	-485.82	862.87	549239.09	370612.93	32°01'08.013"N	104°18'28.217"W	12.00	5.08	10.88	End of 3D Arc
9222.00†	75.39	93.200	179.704	8361.38	565.60	-561.09	863.25	549239.47	370537.67	32°01'07.268"N	104°18'28.213"W	0.00	0.00	0.00	
9322.00†	100.00	93.200	179.704	8355.80	665.44	-660.93	863.77	549239.99	370437.83	32°01'06.280"N	104°18'28.207"W	0.00	0.00	0.00	
9422.00†	100.00	93.200	179.704	8350.21	765.29	-760.77	864.29	549240.51	370338.00	32°01'05.292"N	104°18'28.202"W	0.00	0.00	0.00	
9522.00†	100.00	93.200	179.704	8344.63	865.13	-860.61	864.80	549241.02	370238.17	32°01'04.304"N	104°18'28.196"W	0.00	0.00	0.00	
9622.00†	100.00	93.200	179.704	8339.05	964.98	-960.46	865.32	549241.54	370138.33	32°01'03.316"N	104°18'28.190"W	0.00	0.00	0.00	
9722.00†	100.00	93.200	179.704	8333.47	1064.82	-1060.30	865.83	549242.05	370038.50	32°01'02.328"N	104°18'28.184"W	0.00	0.00	0.00	
9822.00†	100.00	93.200	179.704	8327.88	1164.66	-1160.14	866.35	549242.57	369938.66	32°01'01.340"N	104°18'28.179"W	0.00	0.00	0.00	
9922.00†	100.00	93.200	179.704	8322.30	1264.51	-1259.99	866.86	549243.08	369838.83	32°01'00.352"N	104°18'28.173"W	0.00	0.00	0.00	
10022.00†	100.00	93.200	179.704	8316.72	1364.35	-1359.83	867.38	549243.60	369739.00	32°00'59.364"N	104°18'28.167"W	0.00	0.00	0.00	
10122.00†	100.00	93.200	179.704	8311.14	1464.20	-1459.67	867.90	549244.12	369639.16	32°00'58.376"N	104°18'28.162"W	0.00	0.00	0.00	
10222.00†	100.00	93.200	179.704	8305.56	1564.04	-1559.51	868.41	549244.63	369539.33	32°00'57.388"N	104°18'28.156"W	0.00	0.00	0.00	
10322.00†	100.00	93.200	179.704	8299.97	1663.88	-1659.36	868.93	549245.15	369439.50	32°00'56.400"N	104°18'28.150"W	0.00	0.00	0.00	
10422.00†	100.00	93.200	179.704	8294.39	1763.73	-1759.20	869.44	549245.66	369339.66	32°00'55.412"N	104°18'28.144"W	0.00	0.00	0.00	
10522.00†	100.00	93.200	179.704	8288.81	1863.57	-1859.04	869.96	549246.18	369239.83	32°00'54.424"N	104°18'28.139"W	0.00	0.00	0.00	
10622.00†	100.00	93.200	179.704	8283.23	1963.42	-1958.88	870.48	549246.69	369140.00	32°00'53.436"N	104°18'28.133"W	0.00	0.00	0.00	
10722.00†	100.00	93.200	179.704	8277.65	2063.26	-2058.73	870.99	549247.21	369040.16	32°00'52.448"N	104°18'28.127"W	0.00	0.00	0.00	
10822.00†	100.00	93.200	179.704	8272.06	2163.10	-2158.57	871.51	549247.73	368940.33	32°00'51.460"N	104°18'28.122"W	0.00	0.00	0.00	
10922.00†	100.00	93.200	179.704	8266.48	2262.95	-2258.41	872.02	549248.24	368840.50	32°00'50.472"N	104°18'28.116"W	0.00	0.00	0.00	
11022.00†	100.00	93.200	179.704	8260.90	2362.79	-2358.26	872.54	549248.76	368740.66	32°00'49.484"N	104°18'28.110"W	0.00	0.00	0.00	
11122.00†	100.00	93.200	179.704	8255.32	2462.64	-2458.10	873.05	549249.27	368640.83	32°00'48.496"N	104°18'28.104"W	0.00	0.00	0.00	
11222.00†	100.00	93.200	179.704	8249.73	2562.48	-2557.94	873.57	549249.79	368541.00	32°00'47.508"N	104°18'28.099"W	0.00	0.00	0.00	
11322.00†	100.00	93.200	179.704	8244.15	2662.32	-2657.78	874.09	549250.31	368441.16	32°00'46.520"N	104°18'28.093"W	0.00	0.00	0.00	
11422.00†	100.00	93.200	179.704	8238.57	2762.17	-2757.63	874.60	549250.82	368341.33	32°00'45.532"N	104°18'28.087"W	0.00	0.00	0.00	



CHISHOLM
ENERGY

Planned Wellpath Report

Cottonwood 29-32 Fed Com WCA No. 3H Rev B.0

Page 6 of 8



**BAKER
HUGHES**
a GE company

REFERENCE WELLPATH IDENTIFICATION

Operator	Chisholm Energy	Slot	Cottonwood 29-32 Fed Com WCA No. 3H
Area	Eddy County, NM	Well	Cottonwood 29-32 Fed Com WCA No. 3H
Field	Eddy County, NM NAD83	Wellbore	Cottonwood 29-32 Fed Com WCA No. 3H
Facility	Cottonwood 29-32 Fed Com WCA No. 3H		

WELLPATH DATA (163 stations) † = interpolated/extrapolated station

MD [ft]	Course Length [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
11522.00†	100.00	93.200	179.704	8232.99	2862.01	-2857.47	875.12	549251.34	368241.50	32°00'44.544"N	104°18'28.081"W	0.00		0.00	0.00
11622.00†	100.00	93.200	179.704	8227.41	2961.86	-2957.31	875.63	549251.85	368141.66	32°00'43.556"N	104°18'28.076"W	0.00		0.00	0.00
11722.00†	100.00	93.200	179.704	8221.82	3061.70	-3057.16	876.15	549252.37	368041.83	32°00'42.568"N	104°18'28.070"W	0.00		0.00	0.00
11822.00†	100.00	93.200	179.704	8216.24	3161.54	-3157.00	876.67	549252.88	367942.00	32°00'41.580"N	104°18'28.064"W	0.00		0.00	0.00
11922.00†	100.00	93.200	179.704	8210.66	3261.39	-3256.84	877.18	549253.40	367842.16	32°00'40.592"N	104°18'28.059"W	0.00		0.00	0.00
12022.00†	100.00	93.200	179.704	8205.08	3361.23	-3356.68	877.70	549253.92	367742.33	32°00'39.604"N	104°18'28.053"W	0.00		0.00	0.00
12122.00†	100.00	93.200	179.704	8199.49	3461.08	-3456.53	878.21	549254.43	367642.49	32°00'38.616"N	104°18'28.047"W	0.00		0.00	0.00
12222.00†	100.00	93.200	179.704	8193.91	3560.92	-3556.37	878.73	549254.95	367542.66	32°00'37.628"N	104°18'28.041"W	0.00		0.00	0.00
12322.00†	100.00	93.200	179.704	8188.33	3660.77	-3656.21	879.24	549255.46	367442.83	32°00'36.640"N	104°18'28.036"W	0.00		0.00	0.00
12422.00†	100.00	93.200	179.704	8182.75	3760.61	-3756.05	879.76	549255.98	367342.99	32°00'35.652"N	104°18'28.030"W	0.00		0.00	0.00
12522.00†	100.00	93.200	179.704	8177.17	3860.45	-3855.90	880.28	549256.49	367243.16	32°00'34.664"N	104°18'28.024"W	0.00		0.00	0.00
12622.00†	100.00	93.200	179.704	8171.58	3960.30	-3955.74	880.79	549257.01	367143.33	32°00'33.676"N	104°18'28.019"W	0.00		0.00	0.00
12722.00†	100.00	93.200	179.704	8166.00	4060.14	-4055.58	881.31	549257.53	367043.49	32°00'32.688"N	104°18'28.013"W	0.00		0.00	0.00
12822.00†	100.00	93.200	179.704	8160.42	4159.99	-4155.43	881.82	549258.04	366943.66	32°00'31.700"N	104°18'28.007"W	0.00		0.00	0.00
12922.00†	100.00	93.200	179.704	8154.84	4259.83	-4255.27	882.34	549258.56	366843.83	32°00'30.712"N	104°18'28.001"W	0.00		0.00	0.00
13022.00†	100.00	93.200	179.704	8149.26	4359.67	-4355.11	882.86	549259.07	366743.99	32°00'29.724"N	104°18'27.996"W	0.00		0.00	0.00
13122.00†	100.00	93.200	179.704	8143.67	4459.52	-4454.95	883.37	549259.59	366644.16	32°00'28.736"N	104°18'27.990"W	0.00		0.00	0.00
13222.00†	100.00	93.200	179.704	8138.09	4559.36	-4554.80	883.89	549260.10	366544.33	32°00'27.748"N	104°18'27.984"W	0.00		0.00	0.00
13322.00†	100.00	93.200	179.704	8132.51	4659.21	-4654.64	884.40	549260.62	366444.49	32°00'26.760"N	104°18'27.979"W	0.00		0.00	0.00
13422.00†	100.00	93.200	179.704	8126.93	4759.05	-4754.48	884.92	549261.14	366344.66	32°00'25.772"N	104°18'27.973"W	0.00		0.00	0.00
13522.00†	100.00	93.200	179.704	8121.34	4858.89	-4854.32	885.43	549261.65	366244.83	32°00'24.784"N	104°18'27.967"W	0.00		0.00	0.00
13622.00†	100.00	93.200	179.704	8115.76	4958.74	-4954.17	885.95	549262.17	366144.99	32°00'23.796"N	104°18'27.961"W	0.00		0.00	0.00
13722.00†	100.00	93.200	179.704	8110.18	5058.58	-5054.01	886.47	549262.68	366045.16	32°00'22.808"N	104°18'27.956"W	0.00		0.00	0.00
13822.00†	100.00	93.200	179.704	8104.60	5158.43	-5153.85	886.98	549263.20	365945.33	32°00'21.820"N	104°18'27.950"W	0.00		0.00	0.00
13922.00†	100.00	93.200	179.704	8099.02	5258.27	-5253.70	887.50	549263.71	365845.49	32°00'20.832"N	104°18'27.944"W	0.00		0.00	0.00
14022.00†	100.00	93.200	179.704	8093.43	5358.11	-5353.54	888.01	549264.23	365745.66	32°00'19.844"N	104°18'27.939"W	0.00		0.00	0.00
14122.00†	100.00	93.200	179.704	8087.85	5457.96	-5453.38	888.53	549264.75	365645.83	32°00'18.856"N	104°18'27.933"W	0.00		0.00	0.00
14222.00†	100.00	93.200	179.704	8082.27	5557.80	-5553.22	889.04	549265.26	365545.99	32°00'17.868"N	104°18'27.927"W	0.00		0.00	0.00
14322.00†	100.00	93.200	179.704	8076.69	5657.65	-5653.07	889.56	549265.78	365446.16	32°00'16.880"N	104°18'27.921"W	0.00		0.00	0.00
14422.00†	100.00	93.200	179.704	8071.11	5757.49	-5752.91	890.08	549266.29	365346.32	32°00'15.892"N	104°18'27.916"W	0.00		0.00	0.00



CHEVRON
ENERGY

Planned Wellpath Report

Cottonwood 29-32 Fed Com WCA No. 3H Rev B.0
Page 7 of 8



REFERENCE WELLPATH IDENTIFICATION

Operator	Chisholm Energy	Slot	Cottonwood 29-32 Fed Com WCA No. 3H
Area	Eddy County, NM	Well	Cottonwood 29-32 Fed Com WCA No. 3H
Field	Eddy County, NM NAD83	Wellbore	Cottonwood 29-32 Fed Com WCA No. 3H
Facility	Cottonwood 29-32 Fed Com WCA No. 3H		

WELLPATH DATA (163 stations) † = interpolated/extrapolated station

MD [ft]	Course Length [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid North [US ft]	Latitude [US ft]	Longitude [°/100ft]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
14522.00†	100.00	93.200	179.704	8065.52	5857.33	-5852.75	890.59	549266.81	365246.49	32°00'14.904"N	104°18'27.910"W	0.00	0.00	0.00
14622.00†	100.00	93.200	179.704	8059.94	5957.18	-5952.59	891.11	549267.33	365146.66	32°00'13.916"N	104°18'27.904"W	0.00	0.00	0.00
14722.00†	100.00	93.200	179.704	8054.36	6057.02	-6052.44	891.62	549267.84	365046.82	32°00'12.928"N	104°18'27.899"W	0.00	0.00	0.00
14822.00†	100.00	93.200	179.704	8048.78	6156.87	-6152.28	892.14	549268.36	364946.99	32°00'11.940"N	104°18'27.893"W	0.00	0.00	0.00
14922.00†	100.00	93.200	179.704	8043.19	6256.71	-6252.12	892.66	549268.87	364847.16	32°00'10.952"N	104°18'27.887"W	0.00	0.00	0.00
15022.00†	100.00	93.200	179.704	8037.61	6356.56	-6351.97	893.17	549269.39	364747.32	32°00'09.964"N	104°18'27.881"W	0.00	0.00	0.00
15122.00†	100.00	93.200	179.704	8032.03	6456.40	-6451.81	893.69	549269.90	364647.49	32°00'08.976"N	104°18'27.876"W	0.00	0.00	0.00
15222.00†	100.00	93.200	179.704	8026.45	6556.24	-6551.65	894.20	549270.42	364547.66	32°00'07.988"N	104°18'27.870"W	0.00	0.00	0.00
15322.00†	100.00	93.200	179.704	8020.87	6656.09	-6651.49	894.72	549270.94	364447.82	32°00'07.000"N	104°18'27.864"W	0.00	0.00	0.00
15422.00†	100.00	93.200	179.704	8015.28	6755.93	-6751.34	895.23	549271.45	364347.99	32°00'06.012"N	104°18'27.859"W	0.00	0.00	0.00
15522.00†	100.00	93.200	179.704	8009.70	6855.78	-6851.18	895.75	549271.97	364248.16	32°00'05.024"N	104°18'27.853"W	0.00	0.00	0.00
15622.00†	100.00	93.200	179.704	8004.12	6955.62	-6951.02	896.27	549272.48	364148.32	32°00'04.036"N	104°18'27.847"W	0.00	0.00	0.00
15664.09	42.09	93.200	179.704	8001.77†	6997.65	-6993.05	896.48	549272.70	364106.30	32°00'03.620"N	104°18'27.845"W	0.00	0.00	End of Tangent

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude [US ft]	Longitude [°/100ft]	Shape
1) Cottonwood 29-32 WCA No. 3H PBHL rev 1	15664.09	8001.77	-6993.05	896.48	549272.70	364106.30	32°00'03.620"N	104°18'27.845"W	point
Cottonwood 29-32 WCA No. 3H LP rev 1		8393.00	-499.45	862.98	549239.20	370599.30	32°01'07.878"N	104°18'28.216"W	point



CHISHOLM
ENERGY

Planned Wellpath Report

Cottonwood 29-32 Fed Com WCA No. 3H Rev B.0
Page 8 of 8



REFERENCE WELLPATH IDENTIFICATION

Operator	Chisholm Energy	Slot	Cottonwood 29-32 Fed Com WCA No. 3H
Area	Eddy County, NM	Well	Cottonwood 29-32 Fed Com WCA No. 3H
Field	Eddy County, NM NAD83	Wellbore	Cottonwood 29-32 Fed Com WCA No. 3H
Facility	Cottonwood 29-32 Fed Com WCA No. 3H		

SURVEY PROGRAM - Ref Wellbore: Cottonwood 29-32 Fed Com WCA No. 3H Ref Wellpath: Cottonwood 29-32 Fed Com WCA No. 3H Rev B.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
22.00	8500.00	BHI NaviTrak (Standard)		Cottonwood 29-32 Fed Com WCA No. 3H
8500.00	15664.09	BHI OnTrak (Standard)		Cottonwood 29-32 Fed Com WCA No. 3H

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Chisolm Energy
LEASE NO.:	NM113944
WELL NAME & NO.:	3H-Cottonwood 29 32 Federal Com WCA
SURFACE HOLE FOOTAGE:	100'/N & 1300'/E
BOTTOM HOLE FOOTAGE:	330'/S & 440'/E, sec. 32
LOCATION:	Section 29, T. 26 S., R.26 E., NMPM
COUNTY:	Eddy County, New Mexico

Potash	☒ None	☐ Secretary	☐ R-111-P
Cave Karst Potential	☐ Low	☐ Medium	☒ Critical
Variance	☒ None	☐ Flex Hose	☐ Other
Wellhead	☒ Conventional	☐ Multibowl	
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP

All previous COAs still apply except the following:

A. CASING

1. The minimum required fill of cement behind the 9 5/8 inch intermediate casing is:

Operator has proposed a DV tool at a depth of 1800', the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

MHH 01172018

GENERAL REQUIREMENTS

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.